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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/558,934	12/02/2005	Tadahiro Ohmi	5016-0102PUS1	6405

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EXAMINER	
LUONG, DZU D	

ART UNIT	PAPER NUMBER
2871	

NOTIFICATION DATE	DELIVERY MODE
10/09/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/558,934	OHMI ET AL.	
	Examiner	Art Unit	
	DZU LUONG	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *13-21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/04/2006,12/02/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-12 in the reply filed on October 27, 2008 is acknowledged.

2. Claims 13-21 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method of manufacturing, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 27, 2008.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 4-5, 7 and 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Baek et al. (US 2004/0119935 A1).

Regarding claim 1:

Baek et al. discloses a substrate (cliché 100. See at least Figs. 4A-C), comprising:

- a transparent base (substrate 101),
- a transparent film (buffer layer 103) in which
  - a groove (105) is formed to reach a main surface of said transparent base (See at least Fig. 4A), and
  - a wiring portion (resist 131) formed in said groove,

  wherein
  - said groove has a maximum width and a minimum width (each of the grooves having different depths and widths. See paragraph 17, lines 5-6), and
  - said wiring portion in said groove has a width and a thickness determined by correlation with the maximum width and the minimum width of said groove (See at least Fig. 4B).

Regarding claim 4:

Baek et al. discloses a substrate according to claim 1, wherein:

- said wiring portion is transparent or opaque (the plurality of resist portions 131 may be irradiated with ultraviolet (UV) light, or the plurality of resist portions 131 may be dried using

heat in order to form a resist pattern 131a. See paragraph 37, lines 7-10).

Regarding claim 5:

Baek et al. discloses a substrate according to claim 1, wherein:

- said transparent film contains inorganic matter (a buffer layer 103, such as a metal, organic material, or silicon, may be applied onto a substrate 101. See paragraph 31, lines 3-5).

Regarding claim 7:

Baek et al. discloses a substrate according to claim 1, wherein:

- a surface of said transparent film and a surface of said wiring portion are substantially flush with each other (See at least Fig. 4B).

Regarding claim 10:

Baek et al. discloses a substrate according to claim 1, wherein:

- said transparent base is made of a glass or a plastic material (glass or plastic substrate. See paragraph 18, lines 3).

Regarding claim 11:

Baek et al. discloses a display device manufactured using said substrate according to claim 1 (a method for fabricating a liquid crystal display (LCD) device includes preparing one of a glass and plastic substrate, forming a plurality of grooves in the substrate,

each of the grooves having different depths and widths, filling resist material into the plurality of grooves. See paragraph 18, lines 1-6).

Regarding claim 12:

Baek et al. discloses a display device according to claim 11, wherein:

- said display device is a liquid crystal display device or an EL display device (See paragraph 18, lines 1-6).

Claim Rejections - 35 USC § 103

6. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baek et al. (US 2004/0119935 A1), in view of Yamada et al. (US 5,583,675).

Regarding claim 2:

Baek et al. discloses a substrate according to claim 1, but is silent as to the transparent film is made of a transparent resin.

Yamada et al. discloses a thin film may be formed of a transparent polymer, for example, a photosensitive resin such as a photoresist material, styrene, PMMA, nylon, polyester, or polyvinyl alcohol (See column 17, lines 38-41). Therefore, it would have been at least obvious to one of ordinary skill in the art to employ for achieving advantages such as Such a thin film shields the ultraviolet rays more tightly and allows the visible light to be transmitted

therethrough at a high transmittance (See column 17, lines 46-48 of Yamada et al.). Accordingly, Baek et al. as modified by Yamada et al. discloses a substrate, wherein:

- said transparent film is made of a transparent resin (transparent polymer of Yamada et al.).

Regarding claim 3:

Baek et al. discloses a substrate according to claim 1, but is silent as to the transparent film is made of a photosensitive transparent resin.

Yamada et al. discloses a thin film may be formed of a transparent polymer, for example, a photosensitive resin such as a photoresist material, styrene, PMMA, nylon, polyester, or polyvinyl alcohol (See column 17, lines 38-41). Therefore, it would have been at least obvious to one of ordinary skill in the art to employ for achieving advantages such as Such a thin film shields the ultraviolet rays more tightly and allows the visible light to be transmitted therethrough at a high transmittance (See column 17, lines 46-48 of Yamada et al.). Accordingly, Baek et al. as modified by Yamada et al. discloses a substrate, wherein:

- said transparent film is made of a photosensitive transparent resin (photosensitive resin of Yamada et al.).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baek et al. (US

2004/0119935 A1), in view of Odemura Junji (JP2001188343. Provided in IDS by Applicants. Hereinafter "Odemura").

Regarding claim 6:

Baek et al. discloses a substrate according to claim 1, but fails to disclose the transparent film is made of a photosensitive resin.

Odemura discloses a photosensitive resin composition contains an alkali-soluble alicyclic olefin polymer for achieving advantages such as it is capable of easily forming a micro-patterned thin film excellent in low dielectric property as well as in various properties such as flatness, heat resistance, transparency and chemical resistance (See abstract of Odemura). Therefore, it would have been at least obvious to one of ordinary skill in the art to employ a photosensitive resin composition for achieving similar advantages. Accordingly, Baek et al. as modified by Odemura discloses a substrate, wherein:

- said transparent film is formed using a resin composition (photosensitive resin composition of Odemura) comprising an alkali-soluble alicyclic olefin resin and a radiation-sensitive component.

8. Claims 8 -9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baek et al. (US 2004/0119935 A1), in view of Ishii et al. (US 6,806,925 B2).

Regarding claim 8:

Baek et al. discloses a substrate according to claim 1, but fails to disclose a

trapezoid-shaped groove.

Ishii et al. discloses a recess POD having trapezoid shape. Therefore it would have been at least obvious to one of ordinary skill in the art to employ a trapezoid-shape recess (Applicants' groove) for achieving advantages such as

- when the maximum width and the minimum width of said groove in transverse section are represented as W1 and W2, respectively,
- a maximum wiring width Wi of said wiring portion in said groove has a relationship of

  $W2 \leq Wi \leq W1$ (See at least Fig. 11B of Ishii et al.).

Regarding claim 9:

Baek et al. discloses a substrate according to claim 8,

wherein: when

- a thickness of said wiring portion in said groove at the maximum wiring width Wi is represented as ti (t1 in Fig. 11B of Ishii et al.),
- a thickness of said transparent film is represented as t1 (t1 + t2 in Fig. 11B of Ishii et al.), and
- a thickness of said transparent film at a position of an average width ((W1+W2)/2) of said groove is represented as t2 ((t1 + t2)/2 in Fig. 11B of Ishii et al.),

  the thickness ti at a position of said maximum wiring width falls within the range

of $t2 \leq ti \leq t1$ (See Fig. 11b of Ishii et al.).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DZU LUONG whose telephone number is (571) 270-3102. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID NELMS can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DL/

Dzu Luong
September 30, 2008

/David Nelms/
Supervisory Patent Examiner, Art Unit 2871